

WHAT IS CLAIMED IS:

1. A scanning method, suitable for use in a scanner having an optical sensing device, wherein the scanner scans a document to be scanned step by step by an N number of scanning lines, so that induced charges with respect to each of the scanning lines are produced on the optical sensing device, the scanning method comprising:

Setting the optical sensing device to have a front pixel region, an effective pixel region that is used for fetching an image of the document to be scanned, and a post pixel region, according to a width of the document to be scanned;

producing induced charges with respect to an nth scanning line, in which a quantity of n is equal to or greater than 1;

fetching out all of the induced charges belonging to the front pixel region and the induced charges belonging to the effective pixel region with respect to the nth scanning line, and transferring the induced charges belonging to the post pixel region with respect to the nth scanning line to the front pixel region, so as to be added with the induced charges belonging to the front pixel region with respect to the $(n + 1)^{\text{th}}$ scanning line;

processing the induced charges belonging to the effective pixel region with respect to the n th scanning line to form a piece of the image, which is then stored; and

judging whether or not the quantity of the parameter n is equal to N ,
5 wherein if it is, then all of the pieces of the image are collected to form a full image with respect to the document to be scanned, and if it is not, then the parameter n is added by 1, and then the $(n + 1)^{\text{th}}$ scanning line is continuously scanned.

2. The scanning method as recited in claim 1, wherein the front pixel
10 region and the post pixel region are located at two sides of the effective pixel region, as well as the front pixel region and the post pixel region have the same number of pixels.

3. The scanning method as recited in claim 1, wherein the optical sensing device comprises an optical charge coupled device (CCD).

15 4. A scanning method, suitable for use in a scanner having an optical sensing device, wherein the scanner scans a document to be scanned step by step by an N number of scanning lines, so that induced charges with respect to each of the scanning lines are produced on a B number of pixels of the optical sensing device, the scanning method comprising:

setting the optical sensing device to have a front pixel region with a C number of pixels, an effective pixel region that has a $(B - 2C)$ number of pixels and is used for fetching an image of the document to be scanned, and a post pixel region with a C number of pixels, according to a width of the document to be scanned;

producing induced charges with respect to an nth scanning line, in which a quantity of n is equal to or greater than 1;

sequentially fetching out all of the induced charges at the pixels of 1 to C belonging to the front pixel region and the induced charges at the pixels of $(C + 1)$ to $(B - C)$ belonging to the effective pixel region with respect to the nth scanning line, and transferring the induced charges at the pixels of $(B - C + 1)$ to B belonging to the post pixel region with respect to the nth scanning line to the front pixel region at the pixels of 1 to C, so as to be added with the induced charges at the pixels of 1 to C belonging to the front pixel region with respect to the $(n + 1)^{\text{th}}$ scanning line;

processing the induced charges belonging to the effective pixel region with respect to the nth scanning line to form a piece of the image, which is then stored; and

judging whether or not the quantity of the parameter n is equal to N, wherein if it is, then all of the pieces of the image are collected to form a full

image with respect to the document to be scanned, and if it is not, then the parameter n is added by 1, and then the $(n + 1)^{\text{th}}$ scanning line is continuously scanned.

5 5. The scanning method as recited in claim 4, wherein the front pixel region and the post pixel region are located at two sides of the effective pixel region, as well as the front pixel region and the post pixel region have the same number of pixels.

6. The scanning method as recited in claim 4, wherein the optical sensing device comprises an optical charge coupled device (CCD).

10 7. A scanning method, suitable for use in a scanner having an optical sensing device, wherein the scanner scans a document to be scanned step by step by a plurality of scanning lines, so that induced charges with respect to each of the scanning lines are produced on the optical sensing device, the scanning method comprising:

15 setting the optical sensing device to have a front pixel region, an effective pixel region that is used for fetching an image of the document to be scanned, and a post pixel region, according to a width of the document to be scanned;

20 sequentially fetching out all of the induced charges belonging to the front pixel region and the induced charges belonging to the effective pixel

region with respect to each one of the scanning lines, and transferring the induced charges belonging to the post pixel region with respect to each one of the scanning lines to the front pixel region, so as to be added with the induced charges belonging to the front pixel region with respect to the next scanning
5 line; and

sequentially processing the induced charges belonging to the effective pixel region with respect to each one of the scanning lines to form a piece of the image, and collecting all of the pieces of the image to form a full image with respect to the document to be scanned.

10 8. The scanning method as recited in claim 7, wherein the front pixel region and the post pixel region are located at two sides of the effective pixel region, as well as the front pixel region and the post pixel region have the same number of pixels.

15 9. The scanning method as recited in claim 7, wherein the optical sensing device comprises an optical charge coupled device (CCD).